Minutes of the National Prisons Hepatitis Network Meeting

Sydney, October 2017

Background

An estimated 220,000 Australians are affected by chronic hepatitis C (HCV) infection, with the overwhelming majority infected via injecting drug use (1). As there is a close relationship between imprisonment, injecting drug use, and HCV, in any given year, at least 20,000 of those chronically infected people spend time in prison. This group constitute one of the most marginalised patient groups affected by HCV, with many unlikely to access health services in any other setting. In addition, there are high rates of ongoing HCV transmission in this group, both in prison and in the community (2, 3). Hence, there is a clear need to prioritise antiviral treatment of prisoners.

The advent of direct-acting antiviral agents (DAAs) and their subsequent listing on the Pharmaceutical Benefits Scheme (PBS) in March 2016, means all Australians with chronic HCV infection have access to well-tolerated, short course, highly curative treatments, including via Highly Specialised Drugs (HSD) Section 100 (S100) prescribing for prisoners. Australia is therefore in a unique position globally with universal, heavily subsidised access both to testing (for HCV antibodies and the virus), as well as to DAA treatments. These elements underpin Australia's efforts to meet the World Health Organisation 2030 HCV elimination goals (4), which include key targets of a reduction in HCV incidence by 90%, HCV treatment provision for 80%, and a reduction in HCV-related mortality by 65%. The major residual challenge for Australia is the development and implementation of the health service infrastructure and models of care to ensure comprehensive access and uptake of DAA treatments to all those affected.

The Fourth National Hepatitis C Strategy (2014-2017) recognized that "The vast majority of people living with HCV are people who inject or have injected drugs. This group must be prioritised in efforts to improve treatment opportunities." (5). In particular, the Strategy designated priority populations, as including "people in custodial settings" and "people of Aboriginal and Torres Strait Islander backgrounds". However, delivery of health services in the prison context is challenging, as prisons feature complex bureaucratic structures, overcrowding, frequent movements, high rates of mental illness, and uncontrolled exposure to violence and illicit drugs.

Against this backdrop, a National Prisons Hepatitis Network was held in October 2017 with the overarching aim to identify current progress HCV treatment scale up in custodial settings in all Australian jurisdictions and identify successes and barriers in achieving scale up. The workshop provided an opportunity for key stakeholders from the corrections health sector in all states and territories to evaluate the current health care systems in their respective jurisdictions with a view to improving access to treatment for prisoners and to "work on refining and developing indicators for the measurement of appropriate HCV treatment and management" (a list of attendees is in the Appendix).

Australian correctional facilities - a brief overview

In the 2016 National Prisoner Census, Australia's prevalent prisoner population was 38,845, of whom 92% were men distributed across approximately 100 individual correctional centres (6). Indigenous Australians made up 27% of the prisoner population, and were 14 times more likely than non-Indigenous to be imprisoned. Around 60,000 people cycle through Australian prisons annually, with the ex-prisoner population estimated at 400,000 (7). Almost 50% of Australian prisoners report

injecting drug use, and 70% are incarcerated for drug-related crimes (8). In Australian prisons, chronic HCV prevalence is 25-30% and HCV transmission high (10-15% per annum among those who inject drugs) (2, 3, 8).

Overview of state and territory prison HCV treatment programs:

Representatives from the corrections health sector in each of the eight Australian states and territories (see below in alphabetical order) were invited to report on the activities of their HCV prison programs, following the PBS listing of DAAs in March 2016. Specifically, representatives from each jurisdiction described their HCV testing protocols, models of care and organisational structures, pharmacy practices, methods of fibrosis determination, prison-based healthcare facilities, and HCV treatment uptake and outcomes. The healthcare of incarcerated persons is the responsibility of the Department of Health (DoH) in most jurisdictions, with the exception of Victoria (Department of Justice [DoJ]) and Western Australia (Department of Correctional Services [DoCS]).

With data presented at the meeting and published survey datasets, the annual prisoner populations and the proportion with chronic HCV infection incarcerated annually in each jurisdiction were estimated, including the proportion of the latter treated by the relevant prison service in the first year of DAA availability (summarised in Table 1). In addition, this national dashboard describes the key features of the hepatitis service in each jurisdiction to compare the different healthcare models and the relevant facilities, services and harm reduction services available at each prison (Table 1). These features are described in detail below:

Australian Capital Territory:

The Australian Capital Territory (ACT) has a single prison housing 409 prisoners at the time period of interest (i.e 2016-17) (6), including both sentenced prisoners and remandees, with an estimated 35% being HCV antibody positive (8). In 2016, 24% of prisoners identified as Indigenous (6). The ACT prison health service offers universal opt-in testing for HCV shortly after reception, with approximately 70% uptake. The HCV service operates as a nurse-led model of care with seropositive prisoners referred to one of two registered nurses (RNs) for clinical and laboratory assessment, including HCV PCR testing and genotyping. DAA prescriptions are completed by two prison-based general practitioners (GPs) who have S100 DAA prescribing privileges. Specialist advice and/or review are available with physicians from Canberra Hospital where indicated by complex co-morbidities or decompensated cirrhosis. Both sentenced prisoner and remandees can access HCV treatment, irrespective of the expected period of incarceration. Prescriptions are processed and dispensed at The Canberra Hospital (TCH) and medications are couriered to the prison in weekly packs, and then distributed to prisoners daily. The laboratory testing algorithm, APRI (AST:Platelet Ratio Index) is used for fibrosis assessment, and a transient elastograph (FibroScan®) has recently been acquired by ACT Justice Health to allow onsite assessments. Medical records remain paper-based, however pathology results are available electronically. Opioid substitution treatment (OST) and bleach for cleansing of injecting devices are available for harm minimisation. Continuity of care for prisoners released on treatment continues to be challenging. In the first 12 months of DAA access 117 prisoners were treated.

Hepatitis service development priorities
- Achieve HCV elimination within the ACT prison - Improved efficiency in HCV testing and treatment initiation

New South Wales:

In 2016-17, New South Wales (NSW) had 34 prisons (33 public, one private) with approximately 12,657 individuals incarcerated at any one time (6), and an HCV antibody prevalence of 26% (9). At that time, 24% of prisoners identified as Aboriginal or Torres Strait Islander (6). A single health service operates across all public prisons. Prisoners undergo nurse-led reception interviews to assess risk factors for HCV, and are offered opt-in testing if appropriate. HCV assessment and treatment is delivered through a nurse-led model incorporating clinical nurse specialists (CNS) and hepatitis-skilled clinical nurse consultants (CNCs), supported by visiting prison-based specialist physicians. The clinical assessment for DAA treatment is initiated by the local prison CNS, and completed by the Hepatitis CNCs, who also conduct FibroScan® clinics across the state. Specialist physicians review these assessments in conjunction with CNCs and prescribe appropriate treatment regimens for the great majority, with a small proportion (9%) of patients with complex co-morbidities or decompensated cirrhosis being reviewed by telehealth or face-to-face assessment. To be eligible for DAA treatment, prisoners must have sufficient residual incarceration to complete the initial 4 weeks of therapy. Those released to freedom are provided with the residual of their medication using Regulation 24 of the PBS and a proforma letter to their GP. All prisoners are considered for HCV treatment irrespective of whether they are sentenced or on remand. Prescriptions are processed at a central prison-based pharmacy prior to distribution to each prison site, where most patients receive a monthly supply for self-administration. The medical record is paper-based; however, pathology blood tests are collected onsite and results made available to clinicians electronically. Harm reduction is available with both bleach (or the quaternary amine, Fincol®) and OST. This treatment program facilitated initiation of 698 treatments in the initial 12 months of DAA access with 92% completing therapy whilst still in custody, with 92% (per protocol) achieving a sustained virological response at 12 weeks post treatment (SVR12).

Hepatitis service development priorities
- Development and implementation of a jurisdiction-wide electronic medical record - Improved efficiencies in HCV testing and service referral - Increased role of primary care RNs in testing for HCV to increase program capacity - Achieve micro-elimination in selected smaller, regional prisons

Northern Territory:

The Northern Territory (NT) has two publically-run prisons, located in Darwin and Alice Springs, with 1,687 inmates (6), of whom 77% are Indigenous, and an estimated 8% are HCV antibody positive (8). Only prisoners who identify a risk factor for HCV infection or have liver biochemical abnormalities undergo screening, usually shortly after reception. The absolute number of HCV diagnoses on prison reception is unknown. Seropositive prisoners are referred to either a Hepatitis CNC (Darwin only), a prison-based RN, or prison-based GP to facilitate further diagnostic testing, provide education, and consideration of referral for DAA treatment. In Darwin, prisoners with chronic HCV are assessed in the prison via the Hepatitis CNC prior to review via telehealth with a specialist at Darwin Hospital. Prisoners referred for treatment from Alice Springs prison are transferred out to attend a clinic with a visiting specialist. Eligibility for prison based HCV treatment is dependent on an adequate expected period of incarceration to deliver the entire treatment course. Medications are dispensed to prisoners daily at both prison sites. Fibrosis assessment in the NT prisons is based on serum

biomarkers, including the proprietary index, HepaScore® or APRI. Where further fibrosis assessment is required, prisoners in Darwin may undergo FibroScan® by transfer out to Darwin Hospital, however no such service is available in Alice Springs. The NT prisons have an electronic health record available at both prison sites and remotely. Pathology blood tests are collected onsite and results are made available to clinicians electronically, and integrated into the electronic medical record. OST is available in both NT prisons for harm reduction. Discharge documentation is prepared for prisoners released on HCV treatment, but rates of successful linkage to care are unknown. The hepatitis services in Darwin and Alice Springs prisons have initiated 18 prisoners in the initial 12 months; 15 prisoners achieved SVR12, 1 relapsed and 2 were lost to freedom.

Hepatitis service development priorities
- Improved efficiency in HCV testing - Procurement of mobile FibroScan machine for fibrosis determination in the prisons

Queensland:

In 2016-17 Queensland had approximately 7,752 prisoners, of whom 32% were indigenous, incarcerated across 14 prisons (6), with 52% estimated to be HCV seropositive (8). Health services for each prison are the responsibility of the regional health district, for which a board establishes local health service priorities, including activities within the prison setting. As such, there is significant diversity in the HCV care across the prisons in the state. HCV screening is similarly directed by each health district and is affected by the relationships between correctional authorities, healthcare staff and prison size including overcrowding, corresponding to a greater amount of competing healthcare priorities. Each prison has unique models of care and protocols for clinical, laboratory and fibrosis assessments. Three examples of this decentralised approach are Lotus Glen prison in Cairns where an in-reach program closely integrated with scale up of DAA treatment in the community treated 96 individuals in the first year, and also provided high levels (70%) of continuity of care for those released whilst on treatment. In Rockhampton, the 500 bed prison is supported by a prison-based hepatitis nurse and telemedicine specialist support. This service initiated 35 individuals on treatment in the first year of DAAs. There are five large metropolitan prisoners (total population ~4,500) serviced by Princess Alexandra Hospital in Brisbane, which until recently had very few treatment initiations, but a telemedicine-based model of care. There are electronic health and pathology records, but these do not yet provide reliable information across all prisons. Harm reduction is limited, with only three prisons offering OST. The number of prisoners across the state initiated on DAA treatment in the first 12 months of DAAs is unclear, but is estimated to be 200.

Hepatitis service development priorities
- Integrated electronic health record including clinical documentation and pathology results - Centralised coordination of HCV assessment and treatment across all health districts - Improved efficiencies in HCV testing and service referral

South Australia:

South Australia (SA) has nine prisons (eight public, one privately run) with approximately 2,966 individuals incarcerated at any one time, including 19% Indigenous (6), and an estimated 18% being HCV antibody positive (8). SA prisons undergo detailed assessment for risk factors for viral hepatitis and are offered universal, opt-in testing for HCV on prison reception and subsequently, when

reviewed with prison medical officers. Although there are somewhat varied models of care across the state, seropositive prisoners are generally referred to the blood-borne virus (BBV) nurse at each prison who performs an assessment and completes a Remote Consultation Form (RCF) to facilitate specialist recommendations for DAA treatment by the prison-based GP for those who are not cirrhotic; whereas for those with cirrhosis the RCF is forwarded for specialist consideration at the Royal Adelaide Hospital (RAH) or The Queen Elizabeth Hospital (TQEH) where a DAA prescription may then be completed, or a telehealth or face-to-face consultation planned. All prisoners at each prison site, including those on remand, are considered for treatment. Fibrosis assessment relies on APRI, with index scores used to triage inmates for FibroScan® at one of the hospitals - a process which is recognised to be slow and logistically challenging, resulting in treatment delays. An electronic health record is available across all prison sites, however RCFs remain paper based. Pathology blood tests are collected onsite and results are made available on the electronic health platform. After DAA script receipt, the external pharmacies (usually at RAH and TQEH) courier medications to the prisons in monthly, and then two monthly allocations. Medications are in general provided to prisoners on a daily basis, however some prisons permit weekly dispensing. Opiate substitution treatment is available in SA prisons for harm reduction. The SA prisons hepatitis services initiated 143 individuals on treatment in the first 12 months following inception of DAA treatment; 102 achieved SVR12 with the majority of the other prisoners being released to freedom prior to the SVR12 time point.

Hepatitis service development priorities
- Improved efficiencies in HCV testing and service referral - Procurement of mobile FibroScan machine for fibrosis determination - Development of an electronic referral process as an extension of the existing eMR

Tasmania:

Tasmania has two prisons with 545 inmates at any one time, including 16% Indigenous (6), and with 40% HCV seropositivity (8). HCV testing is offered to all prisoners on reception and approximately 95% of prisoners are screened. Blood borne viral testing is repeated biannually thereafter. Seropositive prisoners are referred for further assessment and management by a hepatitis-skilled prison-based medical officer, who completes a DAA prescription which is dispensed from the public hospital pharmacy closest to each prison. Medications are delivered to the prisons monthly, and either provided to prisoners for self-administration, or supervised daily dispensing, as per each prisons protocol. A medical officer within the corrections health service has been granted honorary specialist status within the Department of Gastroenterology at Royal Hobart Hospital to enhance HCV treatment delivery within the prison by reducing the need for access specialist services outside the prison. Further specialist advice and/or review, primarily for prisoners with decompensated cirrhosis, is available with physicians at Royal Hobart Hospital. Both sentenced prisons and remandees are eligible for treatment irrespective of the estimated period of incarceration. Pathology blood tests are collected onsite, with results available only in paper format at the prison, necessitating each to be manually checked. Fibrosis assessment was previously limited to clinical examination and non-invasive tools (APRI), however a FibroScan® has recently been acquired by the service. Opioid substitution treatment (OST) is available. Linkage to care for prisoners released to freedom has been satisfactory resulting from ongoing concerted efforts from correctional healthcare

staff. In the first 12 months following DAA access, 92 prisoners initiated HCV treatment; 43 achieved SVR12, 24 an EOT response and 7 had virological relapse. A result was not available for the remaining 18 prisoners.

Hepatitis service development priorities
- Appointment of a Hepatitis CNC to assist with prisoner assessment and treatment initiation - Integrated electronic medical record

Victoria:

In 2016-17, Victoria had approximately 6,476 prisoners at any one time, including 8% Indigenous, and an HCV antibody prevalence of approximately 25% (6, 8). Universal opt-in testing for HCV is offered on reception and at subsequent between-prison transfers. A statewide, in-reach nurse-led model of care for HCV treatment operates across all 14 prison sites (12 public, two private). Seropositive prisoners are referred to Hepatitis CNCs who attend each prison site and conduct clinical assessments, perform FibroScans®, and arrange for further pathology blood tests. Specialist physicians review these assessments in conjunction with CNCs and prescribe appropriate treatment regimens for the great majority, with a small proportion of patients with complex co-morbidities or decompensated cirrhosis being reviewed by telehealth or face-to-face assessment with the specialist. Only sentenced prisoners able to complete treatment within their period of incarceration are eligible for treatment (note - this is under review). All prescriptions are dispensed at a central hospital pharmacy prior to couriering to each prison site monthly. An electronic medical record services all prison sites, and is available remotely at the coordinating hospital. Pathology blood tests are collected onsite and the results are integrated into the electronic health record. Harm reduction is available within the prisons, including OST and bleach. Prisoners released while receiving therapy are provided with their remaining treatment course on release while those released untreated are referred to a healthcare services capable of delivering HCV therapy; successful linkage rates however remain unknown. This treatment service facilitated initiation of 581 treatments in the first 12 months of DAA access; amongst this group, the SVR12 cure rate was 94% (per protocol).

Hepatitis service development priorities
- Increased program resourcing to upscale treatment delivery - Improved efficiencies in HCV testing to increase service referral

Western Australia:

Western Australia has a prisoner population of approximately 6,193, including 38% Indigenous inmates, spread across 17 prisons (6), with an HCV seroprevalence of 23% (8). Universal opt-in testing for HCV is offered to all prisoners. There is significant diversity in the models of HCV care across the prisons in the state. Regional prisons rely on visiting specialists, or GPs at some centres, to provide HCV care. Treatment in the seven metropolitan prisons is provided by the Fiona Stanley Hospital. A partnership with Department of Justice enables prison GPs to provide treatment within Casuarina Prison, whereas the remaining six metropolitan prisons rely on logistically complex and slow transfers to Fiona Stanley Hospital. To be eligible for treatment by the prison GP, prisoners must be sentenced (i.e., remandees are excluded) and have at least six months of sentence remaining from the time of treatment initiation. For metropolitan prisons, DAA therapy is dispensed as a complete course from the pharmacy at Fiona Stanley Hospital to the Central Prison Pharmacy

for distribution, whereas the logistics of medication supply in regional areas are varied. Fibrosis assessment is performed using a serum-based fibrosis biomarker, Hepascore®, which is provided by the pathology provider and subsidised by the DoH. An electronic medical record exists across the state and HCV protocols are available to clinicians within this platform. OST for harm reduction is available in some prisons. The DoJ attempts to link prisoners to community based care, but the success rate of this remains unknown. In the first 12 months of DAA access, 204 treatments were initiated, predominantly in regional centres.

Hepatitis service development priorities
- Centralised agenda for HCV treatment across the entire state - Improved referral efficiencies and management in metropolitan prisons

Models of care – barriers and solutions:

Barriers to care encountered across different jurisdictions were discussed in the assembled group. These included *structural and organisation challenges* such as:

- Complex and poorly coordinated health care systems at the jurisdiction-level with no state-wide coordination and/or policy.
- Difficulties in accessing prisoners for assessment in some custodial settings, reflecting priority given to security, particularly in maximum security facilities.
- Limitations in both health care facilities and staff preventing treatment scale up.
- Geographic remoteness of some prison sites.

In addition, limitations in *health service delivery* were common, including:

- Disparities between the large numbers of those at risk of HCV infection in prison and the actual numbers receiving testing – reflecting both workforce capacity and variable attitudes of custodial staff and health care personnel to the importance of HCV testing and treatment for prisoners.
- Highly varied access to harm reduction programs to prevent primary infection and reinfection following treatment, including access to bleach (or equivalent) for cleansing of injecting devices, and OST, and no needle-syringe exchange programs in any jurisdiction.

Finally, within the *prisons hepatitis services*, the delegates reported:

- Inadequate resourcing for hepatic fibrosis assessment, including the lack of availability of FibroScan® and education and training of staff in fibrosis assessment.
- The need for streamlined on-treatment monitoring.
- Difficulties in providing treatment continuity and appropriate follow up for prisoners released to freedom while receiving HCV therapy.

Potential solutions for these issues were discussed. The group advocated most strongly for innovative approaches to providing HCV care by cooperation between custodial and health care staff to improve access, and to facilitate the logistics of clinical and laboratory assessments and treatment for prisoners.

At a *prison level*, the solutions discussed included:

- Ensuring high coverage testing of all new arrivals on reception into prison to maximise the number of prisoners moving into, and through, the HCV care cascade.
- Increasing the number trained GP DAA prescribers to facilitate local treatments.
- Scale up of telehealth services to improve access to specialist medical review for those with advanced liver disease or complex co-morbidities.
- Increasing access to OST.

At a *program level,* there was universal agreement of the need for:

- Streamlined assessment and treatment protocols and proformas, as well as simplified on-treatment monitoring to increase assessment and treatment throughput.
- More accessible assessment of fibrosis including using laboratory algorithms such as the APRI score to triage and identify people with a low probability of cirrhosis to minimise the need for FibroScan®.
- Targeted and opportunistic education to improve awareness of the simplicity and efficacy of HCV DAA treatment amongst custodial staff and prisoners.
- Increased resourcing to appoint Hepatitis CNCs across each jurisdiction.

Several of these potential solutions were then discussed in detail including: fibrosis assessment, continuity of care, electronic health infrastructure, pharmacy logistics and the need for integrated harm reduction:

Hepatic fibrosis assessment:

It was agreed that the protocols regarding hepatic cirrhosis determination be both simplified to reduce the number of prisoners requiring FibroScan®, yet maintain the reliability to inform decision-making for patients with chronic HCV in regard to:

- the most appropriate DAA regimen;
- on-treatment monitoring;
- the need for ongoing care following cure for those with cirrhosis, including hepatocellular carcinoma surveillance.

The delegates reported varied approaches for fibrosis assessment, including use of serum biomarker scores such as APRI and Hepascore®, and also FibroScan® – conducted either on site or by transfer of prisoners to nearby hospital services. It was agreed that ready access to prison-based FibroScan should be made available in all jurisdictions, along with a national system for credentialing for fibro-elastography training, ensuring that is not unduly onerous to up-skill program staff and to manage staff turn over. In addition, it was agreed that all jurisdictions should explore the role of serum biomarkers as an alternative, particularly in states were FibroScan® access is limited (10, 11).

Continuity of care:

All states and territories reported the challenging experience of managing transition of HCV care from prison to community. The difficulties for prisoners in the post release period were discussed, including competing priorities such as establishing stable accommodation, negotiating old and new social networks, and establishing an income stream – all of which mean that HCV treatment becomes a lesser priority.

The challenge of ensuring continuity of HCV care for prisoners receiving DAA treatment when released was regarded as particularly unresolved, especially when prisoners were released without notice (for example following a parole hearing) - without medications or follow up arranged. All jurisdictions reported the considerable efforts typically being undertaken, including use of Regulation 24 (which allows dispensing of the complete treatment course to the patient), along with proforma correspondence to a local community GP, specialist, or Liver Clinic to improve the continuity of care. Discrimination and stigma of ex-prisoners was identified as a key factor impairing continuity of care, including the need to find a non-discriminatory and capable GP to provide treatment and a pharmacy willing to dispense medication (12).

The delegates also discussed whether formal confirmation of cure was critical (given the compelling evidence of cure rates above 90%) or whether efforts were better focused on increasing treatment throughput in the prison sector, albeit with incomplete follow up, in the knowledge that most people will achieve cure.

Electronic health infrastructure:
The necessary components of electronic health facilities to ensure a successful HCV assessment treatment program were identified. These include:

- an electronic medical record to allow access by nursing, medical and pharmacy staff to review and coordinate clinical assessment and investigations as well as prisoner movements.
- an electronic pathology record to allow efficient access to review pathology results.
- telemedicine facilities to facilitate specialist input, particularly in jurisdictions with geographical isolation such as Western Australia and Queensland.

It was noted that several jurisdictions currently lack one or more of these facilities.

Pharmacy arrangements:
Efficient and reliable delivery of medication to prisoners was identified as a key component of an effective hepatitis service. The group agreed that in high volume services, dedicated pharmacists and pharmacy technicians were necessary for successful treatment programs. The Victorian prisons hepatitis service described a linear relationship between increased pharmacy support and increased treatment delivery, thereby providing an argument for similar expectations for each jurisdiction.

Integrated harm reduction:
The group agreed that integration of HCV treatment with harm reduction to prevent new infections was critical. The importance of such programs was highlighted in data from the NSW prisons that has identified ongoing incidence rates of approximately 10% per annum (2).

Bleach (or a quaternary amine disinfectant) for cleaning shared injecting equipment was reported by delegates to be the only primary prevention generally available within prisons. However, bleach has been demonstrated to be ineffective for HCV prevention in the prison setting (2), it is variably available, and its use is associated with stigma, thereby collectively limiting any potential benefit.

All jurisdictions reported that OST provision for opioid dependent prisoners was either insufficient to meet demand or unavailable. The group discussed the potential for significant HCV treatment scale-up as a prevention strategy – currently being evaluated in the NHMRC-funded Surveillance and

Treatment of Prisoners with hepatitis C (SToP-C) study. The group endorsed the need for enhanced OST provision, integrated harm reduction and HCV care pathways – consideration for amalgamating OST provision and HCV referral pathways to maximise engagement in treatment and prevent reinfection.

National agenda

The delegates discussed the need for a national statement on prison-based HCV care to influence meaningful change across all Australian jurisdictions, that would ultimately help improve the capacity and efficiency of HCV assessment and treatment programs within correctional facilities.

The delegates recognised that the prison-based S100 prescribing provision in the PBS listing of DAAs was deliberately intended to facilitate such service delivery within the prison setting, identifying prisoners as a priority population who would need to be treated in large numbers if HCV was to be eliminated in Australia as a public health issue by 2030. Hence, it was considered imperative that action be taken to ensure such treatment scale-up occurs and is sustained for the next ten years.

The following five action items were proposed as priorities for inclusion in a national statement:

1. Surveillance should be undertaken to estimate:
    a. the number (and percentage) of all prisoners annually in each jurisdiction who are at risk of HCV infection;
    b. the number (and percentage) of all prisoners annually in each jurisdiction who are chronically infected with HCV;
    c. the number (and percentage) of all prisoners with chronic HCV annually in each jurisdiction who are incarcerated for more than: 28 days (potentially sufficient for HCV assessment); 112 days (potentially sufficient for assessment and completion of 12 weeks of treatment); and 196 days (potentially sufficient for assessment, 12 weeks of treatment and 12 weeks follow-up for SVR);
    d. the number (and percentage) of all inmates with chronic HCV initiating DAA treatment in the prisons in each jurisdiction should be collated annually.
2. Annual testing and treatment targets (key performance indicators; KPIs) should be established in each jurisdiction, and potentially for each prison (where appropriate), whether public or private, regional or metropolitan. This includes the number and percentage of prisoners who:
    a. are tested for HCV antibody and PCR, and the time period from prisoner reception to testing;
    b. undergo assessment with a view to HCV treatment;
    c. initiate DAA treatment;
    d. are cured of HCV infection.
3. There should be an annual report detailing the national prison HCV assessment and treatment activity, which includes a 'national dashboard' for the HCV program in each jurisdiction detailing the: i) staffing and facilities; and ii) the estimates detailed in Recommendation 1 against the performance targets in Recommendation 2.
4. Increased advocacy for scale-up of HCV assessment and treatment in the prisons was recommended as a key element of the strategy to achieve HCV elimination in Australia, including by:

a. development of 'prison-suitable' HCV education programs to raise awareness amongst prisoners;
b. development of HCV education and training programs for all correctional and health care staff;
c. facilitating appointment of hepatitis-skilled CNCs in the prison sector;
d. facilitating S100 training for prison-based GPs to allow prescribing privileges for the independent management of uncomplicated HCV infection.

5. Resources should be identified to allow establishment of infrastructure to support the National Prisons Hepatitis Network. The representatives acknowledged that core funding of $100,000 AUD would likely be required annually for 3 years to support the Network:
    a. Possible funding sources were discussed including the Commonwealth Department of Health and Aging for funding to support:
        - an administrative assistant - 0.5 EFT;
        - office costs, including teleconferencing, website development, publication costs;
        - establishment of a mailing list for the Network;
        - an annual conference to review progress in the action plans;
        - development of a repository for prison hepatitis resources and policies.

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Table 1

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
Prisons (n)	**34**	**14**	**14**	**9**	**17**	**2**	**2**	**1**	**94**
Inmates – prevalent (n)[1]	**12,657**	**6,476**	**7,752**	**2,966**	**6,193**	**545**	**1,687**	**409**	**38,685**
No. HCV Ab pos. – annual[2,3]	**10,126**	**8,807**	**12,403**	**1,898**	**4583**	**839**	**3,374**	**393**	**42,423**
No. chronic HCV – annual[4]	**7,594**	**6,605**	**9,302**	**1,424**	**3,437**	**629**	**76**	**294**	**29,361**
Hepatitis service	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	
HCV screening	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	**Y**	
Hepatitis-specific nurses	**Y**	**Y**	**N**	**N**	**N**	**Y**	**N**	**Y**	
Model of care	**Nurse-led**	**Nurse-led**	**Specialist-led**	**Nurse-led**	**Specialist-led**	**GP-led**	**Specialist-led**	**GP-led**	
Service: prison-based or in-reach	**Prison-based**	**In-reach**	**In-reach**	**In-reach**	**In-reach**	**Prison-based**	**In-reach**	**Prison-based**	
Portable Fibroscan	**Y**	**Y**	**N**	**N**	**N**	**N**	**N**	**Y**	
Harm minimisation	**OST, B**	**OST, B**	**OST**	**OST**	**OST**	**OST**	**OST**	**OST, B**	
No. DAA treatments (n)[6]	**698**	**581**	**~200**	**143**	**204**	**92**	**18**	**117**	**1853**
Chronic HCV treated (%)[7]	**9**	**9**	**2**	**10**	**6**	**15**	**24**	**40**	**6**
2017-2018 DAA target (n)	**1000**	**896**	**N**	**N**	**N**	**N**	**N**	**N**	

[1] Prisoners in Australia. Australian Bureau of Statistics 2016. http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/4517.0~2016~Main%20Features~Imprisonment%20rates~12

[2] Assuming average incarceration period of 6 months – hence cumulative annual prevalent population is approximately double the prevalent.

[3] HCV antibody incidence from National Prison Entrants' Bloodborne Virus and Risk Behaviour Survey Report 2004, 2007, 2010 and 2013. https://kirby.unsw.edu.au/project/npebbvs;
NSW data from Inmate Health Survey 2015 www.justicehealth.nsw.gov.au/publications/2015_NHPS_FINALREPORT.pdf
ACT data from 2010 ACT Inmate Health Survey http://stats.health.act.gov.au/sites/default/files/Number%2055%20-%202010%20ACT%20Inmate%20Health%20Survey%20-%20Summary%20results%20July%202011.pdf

[4] Assuming 75% of those with HCV antibodies are also viraemic.

[5] OST: Opioid substitution treatment; B: bleach or disinfectant

[6] Treatments delivered in first 12 months between 1st March 2016 and 28th February 2017

[7] No. Treated/ No. with chronic HCV.

Appendix: List of attendees

First Name	Last Name	Organisation
Alex	Thompson	St. Vincent's Hospital Melbourne
Andrew	Lloyd	The Kirby Institute, UNSW
Andrew	Wiley	South Australian Prison Health Service
Annabelle	Gibson	St. Vincent's Hospital Melbourne
Anton	Colman	Royal Adelaide Hospital
Barry	Jenkins	Fiona Stanley Hospital
Ben	Harkness	Justice Health Services ACT
Camilla	Preeston	Justice Health Victoria
Cassie	Allan	Tasmanian Health Services
Catherine	Marshall	Royal Darwin Hospital
Cherie	Power	NSW Health
Chloe	Goodred	Fiona Stanley Hospital
Collette	McGrath	Justice Health & Forensic Mental Health Network (JH&FMHN) NSW
David	Movrick	Tasmanian Health Services
Edmund	Tse	Royal Adelaide Hospital
Eugene	Priscott	Cairns Sexual Health Service
Faline	Howes	Department of Health and Human Services
Frances	Donaldson	Tasmanian Health Services
Fraser	Moss	Department of Justice
Graeme	Macdonald	Princess Alexandra Hospital
Greg	Dore	The Kirby Institute, UNSW
Harris	Cabatingan	Cairns and Hinterland Hospital Health Service
Helen	Tyrrell	Hepatitis Australia
Jaclyn	Tate-Baker	Chronic Disease Coordination Unit, Royal Darwin Hospital
Jacqueline	Clegg	Justice Health & Forensic Mental Health Network (JH&FMHN) NSW
James	Blogg	Justice Health & Forensic Mental Health Network (JH&FMHN) NSW
James	Dunne	Australian Injecting & Illicit Drug Users League (AIVL)
James	Wood	Justice Health & Forensic Mental Health Network (JH&FMHN) NSW
Janice	Hare	Department of Justice
Jason	Hargraves	Australian Injecting & Illicit Drug Users League (AIVL)
Jeffrey	Post	Justice Health & Forensic Mental Health Network (JH&FMHN) NSW
Joe	Doyle	Burnet Institute
Judith	Bevan	WA Department of Health
Katelin	Haynes	Australasian Society for HIV and Viral Hepatitis Medicine (ASHM)
Kristen	Overton	Justice Health & Forensic Mental Health Network (JH&FMHN) NSW
Linda	Selvey	University of Queensland
Lindsay	Mollison	University of Western Australia
Lucy	McDonald	St. Vincent's Hospital Melbourne
Margaret	Hellard	Burnet Institute
Mark	Stoove	Burnet Institute
Michael	Levy	Justice Health Services
Michelle	Kudell	Hepatitis Queensland
Pangszee	Ong	Royal Adelaide Hospital
Paul	Clark	Princess Alexandria Hospital
Rachel	Lee	Justice Health & Forensic Mental Health Network (JH&FMHN) NSW
Rebecca	Redpath	Justice Health Victoria
Richard	Gray	The Kirby Institute, UNSW
Ruth	Evans	Justice Health Services ACT
Sally	Rowell	Hepatitis WA
Stuart	Loveday	Hepatitis NSW
Stuart	Kinner	School of Population and Global Health, University of Melbourne
Tim	Papaluca	St. Vincent's Hospital Melbourne
Tom	Rees	Communicable Disease Control Branch, SA Health
Tom	Turnbull	Correct Care Australasia Pty Ltd